Listing of Claims:

The listing of claims below will replace all prior versions and listings of claims in the application.

1.-106. (Canceled)

107. (Previously presented) A method of isolating an end population of muscle-derived progenitor cells (MDCs), comprising:

(a) plating a suspension of muscle cells from skeletal muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(b) re-plating non-adherent cells from step (a) in a second collagen-coated container;

(c) repeating step (b) at least three times to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(d) isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

108.-109. (Canceled)

110. (Previously presented) The method according to claim 107, wherein step (b) is repeated at least five times.

111. (Previously presented) The method according to claim 107, wherein step (d) occurs at 5 days following step (b).

112. (Previously presented) The method according to claim 107, wherein step (d) occurs at 6 days following step (b).

113. (Canceled)

114. (Previously presented) The method according to claim 107, wherein a clonal population of MDCs is prepared following step (d).

115.-153. (Canceled)

154. (Previously presented) A method of augmenting or bulking esophageal muscle tissue in a recipient, comprising:

introducing a physiologically-acceptable composition comprising MDCs into an area of esophageal muscle tissue of the recipient in an amount sufficient for the MDCs to augment or bulk the esophageal muscle tissue; wherein the MDCs are isolated by the steps of:

(i) plating a suspension of muscle cells from skeletal muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(ii) re-plating non-adherent cells from step (i) in a second collagen-coated container;

(iii) repeating step (ii) at least once to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(iv) isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

155.-156 (Canceled)

157. (Previously presented) The method according to claim 154, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

158. (Previously presented) The method according to claim 154, wherein the composition further comprises a carrier, excipient, or diluent.

159. (Previously presented) The method according to claim 158, wherein the carrier comprises an absorbent or adherent material.

160. (Previously presented) The method according to claim 158, wherein the carrier is a collagen sponge material.

161. (Previously presented) The method according to claim 154, wherein the esophageal muscle tissue is gastroesophageal muscle tissue.

162. (Canceled)

163. (Previously presented) A method of augmenting or bulking sphincter muscle tissue in a recipient, comprising:

introducing a physiologically-acceptable composition comprising MDCs into an area of sphincter muscle tissue of the recipient in an amount sufficient for the MDCs to augment or bulk the sphincter muscle tissue; wherein the MDCs are isolated by the steps of:

(i) plating a suspension of muscle cells from skeletal muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(ii) re-plating non-adherent cells from step (i) in a second collagen-coated container;

(iii) repeating step (ii) at least once to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(iv) isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

164.-165. (Canceled)

166. (Previously presented) The method according to claim 163, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

167. (Previously presented) The method according to claim 163, wherein the composition further comprises a carrier, excipient, or diluent.

168. (Previously presented) The method according to claim 167, wherein the carrier comprises an absorbent or adherent material.

169. (Previously presented) The method according to claim 167, wherein the carrier is a collagen sponge material.

170. (Previously presented) A method of augmenting or bulking bladder muscle tissue in a recipient, comprising:

introducing a physiologically-acceptable composition comprising MDCs into an area of bladder muscle tissue of the recipient in an amount sufficient for the MDCs to augment or bulk the bladder muscle tissue; wherein the MDCs are isolated by the steps of:

(i) plating a suspension of muscle cells from skeletal muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(ii) re-plating non-adherent cells from step (i) in a second collagen-coated container;

(iii) repeating step (ii) at least once to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(iv) isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

171.-172. (Canceled)

173. (Previously presented) The method according to claim 170, wherein the bladder muscle tissue is ureteral-bladder muscle tissue.

174. (Previously presented) The method according to claim 170, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

175. (Previously presented) The method according to claim 170, wherein the composition further comprises a carrier, excipient, or diluent.

176. (Previously presented) The method according to claim 175, wherein the carrier comprises an absorbent or adherent carrier material.

177. (Previously presented) The method according to claim 175, wherein the carrier is a collagen sponge material.

178. (Previously presented) A method of augmenting or bulking skin tissue to ameliorate a dermatological condition selected from one or more of wrinkles, rhytids, stretch marks, depressed scars, acne vulgaris scars, lip hypoplasia, cutenous depression, wound, fissure, dermatological lesions in a recipient comprising:

introducing a physiologically-acceptable composition comprising MDCs into an area of skin tissue in an amount sufficient to augment or bulk the skin tissue to ameliorate the dermatological condition; wherein the MDCs are isolated by the steps of:

(i) plating a suspension of muscle cells from skeletal muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(ii) re-plating non-adherent cells from step (i) in a second collagen-coated container;

(iii) repeating step (ii) at least once to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(iv) isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

179. (Canceled)

180. (Previously presented) The method according to claim 178, wherein the composition is introduced into the recipient by an administration route selected from subcutaneous injection or intradermal injection.

181. (Previously presented) The method according to claim 178, wherein the composition further comprises a carrier, excipient, or diluent.

182. (Previously presented) The method according to claim 181, wherein the carrier comprises an absorbent or adherent material.

183. (Previously presented) The method according to claim 181, wherein the carrier is a collagen sponge material.

184-189. (Canceled)

190. (Currently amended) A method of augmenting or bulking esophageal muscle tissue in a recipient, comprising:

introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a clonal population thereof, into an area of esophageal muscle tissue of the recipient,

wherein the cells are in an amount sufficient to augment or bulk the esophageal muscle tissue, and wherein the cells survive ~~over time~~ for at least five days in the esophageal muscle tissue to provide augmented or bulked esophageal muscle tissue in the recipient.

191.-192. (Canceled)

193. (Previously presented) The method according to claim 190, wherein the composition is introduced into the recipient by an administration route selected from injection or intravenous delivery.

194. (Previously presented) The method according to claim 190, wherein the composition further comprises a carrier, excipient, or diluent.

195. (Previously presented) The method according to claim 194, wherein the carrier is a collagen sponge material.

196. (Previously presented) The method according to claim 190, wherein the esophageal muscle tissue is gastroesophageal muscle tissue.

197. (Currently amended) A method of augmenting or bulking skin tissue to ameliorate a dermatological condition in an individual, comprising:

introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a cloned population thereof, into an area of the skin tissue,

wherein the cells are in an amount sufficient to augment or bulk the skin tissue to ameliorate the dermatological condition; and wherein the cells survive ~~over time~~ for at least five days in the area of the skin tissue to provide augmented or bulked skin tissue in the recipient.

198. (Canceled)

199. (Previously presented) The method according to claim 197, wherein the composition further comprises a carrier, excipient, or diluent.

200. (Previously presented) The method according to claim 199, wherein the carrier is a collagen sponge material.

201. (Currently amended) A method of augmenting or bulking sphincter muscle tissue in a recipient, comprising:

introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a clonal population thereof, into an area of sphincter muscle tissue of the recipient,

wherein the cells are in an amount sufficient to augment or bulk the sphincter muscle tissue, and wherein the cells survive ~~over time~~ for at least five days in the sphincter muscle tissue to provide augmented or bulked sphincter muscle tissue in the recipient.

202.-203 (Canceled)

204. (Previously presented) The method according to claim 201, wherein the composition further comprises a carrier, excipient, or diluent.

205. (Previously presented) The method according to claim 204, wherein the carrier is a collagen sponge material.

206. (Currently amended) A method of augmenting or bulking bladder muscle tissue in a recipient, comprising:

introducing a physiologically-acceptable composition comprising isolated, desmin-expressing, skeletal muscle-derived progenitor cells, or a clonal population thereof, into an area of bladder muscle tissue of the recipient,

wherein the cells are in an amount sufficient to augment or bulk the bladder muscle tissue and wherein the cells survive ~~over time~~ for at least five days in the bladder muscle tissue to provide augmented or bulked bladder muscle tissue in the recipient.

207.-208. (Canceled)

209. (Previously presented) The method according to claim 206, wherein the bladder muscle tissue is ureteral-bladder muscle tissue.

210. (Previously presented) The method according to claim 206, wherein the composition further comprises a carrier, excipient, or diluent.

211. (Previously presented) The method according to claim 210, wherein the carrier is a collagen sponge material.

212-215. (Canceled)

216. (Previously presented) A method of isolating an end population of skeletal muscle-derived progenitor cells (MDCs), comprising:

(a) plating a suspension of skeletal muscle cells from skeletal muscle tissue in a first container to which fibroblast cells of the skeletal muscle cell suspension adhere;

(b) re-plating non-adherent cells from step (a) in a second container;

(c) repeating step (b) at least three times; and

(d) isolating the skeletal muscle-derived MDCs.

217. (Previously presented) A method of augmenting or bulking tissue selected from one or more of esophageal muscle tissue, gastroesophageal muscle tissue, sphincter muscle tissue, bladder muscle tissue, ureteral-bladder muscle tissue, or skin tissue in a recipient, comprising:

introducing a physiologically-acceptable composition comprising skeletal muscle-derived (MDCs), or a clonal population thereof, into an area of the recipient's gastroesophageal, sphincter, bladder, ureteral-bladder smooth muscle tissue, or skin tissue in an amount sufficient for the MDCs to augment or bulk the tissue; wherein the MDCs are isolated by the steps of:

(i) plating a suspension of muscle cells from skeletal muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(ii) re-plating non-adherent cells from step (i) in a second collagen-coated container;

(iii) repeating step (ii) at least once to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(iv) isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

218. (Previously presented) The method of claim 216, further comprising a step of isolating a clonal population of the MDCs from step (d).

219. (Previously presented) The method of claim 216, wherein the step of re-plating is after 15-20% of cells adhered to the first container.

220. (Previously presented) A method of isolating an end population of skeletal muscle-derived progenitor cells (MDCs), comprising:

(a) plating a suspension of skeletal muscle cells from skeletal muscle tissue in a first container to which fibroblast cells of the skeletal muscle cell suspension adhere,

(b) re-plating non-adherent cells from step (a) in a second container, wherein the step of re-plating is after 15-20% of cells have adhered to the first container;

(c) repeating step (b) at least once;

(d) isolating the skeletal muscle-derived MDCs.

221. (Previously presented) The method of claim 107, wherein the step of re-plating is after 15-20% of cells adhered to the first container.

222. (Previously presented) A method of isolating an end population of muscle-derived progenitor cells (MDCs), comprising:

(a) plating a suspension of muscle cells from skeletal muscle tissue in a first collagen-coated container to which fibroblast cells of the muscle cell suspension adhere;

(b) re-plating non-adherent cells from step (a) in a second collagen-coated container, wherein the step of re-plating is after 30-40% of cells have adhered to the first container;

(c) repeating step (b) at least once to enrich for an end population of viable, non-fibroblast, desmin-expressing cells in the second container; and

(d) isolating the MDCs as the end population of viable, non-fibroblast, desmin-expressing cells.

223. (Previously presented) The method of claim 154, wherein a clonal population of MDCs is prepared following step (iv).

224. (Previously presented) The method of claim 163, wherein a clonal population of MDCs is prepared following step (iv).

225. (Previously presented) The method of claim 170, wherein a clonal population of MDCs is prepared following step (iv).

226. (Previously presented) The method of claim 178, wherein a clonal population of MDCs is prepared following step (iv).

227. (Previously presented) The method of claim 197, wherein the dermatological condition is selected from one or more of wrinkles, rhytids, stretch marks, depressed scars, acne vulgaris scars, lip hypoplasia, or dermatological lesions.

228. (Previously presented) The method of claim 197, wherein the dermatological condition is cutaneous depression, wound, or fissure.

229. (Previously presented) The method of claim 226, wherein the dermatological condition is diverticulae, cyst, fistulae, lesion, or aneurysm.